

## **REMARKS**

**[0001]** Applicant's attorney respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1-32 are presently pending. Claims 2, 4, and 6 are amended herein.

### **Allowable Subject Matter**

**[0002]** Applicant would like to thank the Examiner for allowing claims 5-7 and 29-31. These claims have not been amended herein, and therefore remain allowable.

## **Substantive Matters**

### **Claim Rejections under § 112 2<sup>nd</sup> ¶**

**[0003]** The Examiner rejects claims 2, 4, and 6 under § 112, 2<sup>nd</sup> ¶, as being indefinite for calling out a data sector as well as a disk sector. In particular, the Examiner indicates that these claims fail to set forth the subject matter which applicant regard as their invention. Applicant's attorney respectfully traverses this rejection.

**[0004]** As discussed in paragraph [0022] of the specification of the present application, a storage disk 10 may be partitioned into a number of disk sectors 12. Each disk sector 12 may include a number of concentric data tracks 14, where data is stored in data sectors within each track 14. As a result, disk sectors 12 comprise data tracks 14 which, in turn, contain data sectors. The Examiner seems to be equating disk sector with data sectors and not understanding this distinction as discussed ion the specification. Accordingly, Applicant's attorney asks the Examiner to withdraw this rejection.

### **Claim Rejections under § 103**

**[0005]** The Examiner rejects claims 1-4, 8-28, and 32 under § 103. For the reasons set forth below, the Examiner has not made a prima facie case showing that the rejected claims are obvious.

**[0006]** Accordingly, Applicant's attorney respectfully requests that the § 103 rejections be withdrawn and the case be passed along to issuance.

**[0007]** The Examiner's rejections are based upon the following references in combination:

- **US Patent No. 5,796,535 to Tuttle et al:** "*Tuttle et al*" hereinafter, (issued August 18, 1998); and
- **US Patent No. 5,862,005 to Leis et al:** "*Leis et al*" hereinafter, (issued January 19, 1999).

## **Obviousness Rejections**

### **Lack of *Prima Facie* Case of Obviousness (MPEP § 2142)**

**[0008]** Applicant disagrees with the Examiner's obviousness rejections. Arguments presented herein point to various aspects of the record to demonstrate that all of the criteria set forth for making a *prima facie* case have not been met. To establish *prima facie* obviousness of a claimed invention, all of the claim recitations must be taught or suggested by the prior art<sup>1</sup> and "all words in a claim must be considered in judging the patentability of that claim against the prior art."<sup>2</sup> Further, if prior art, in any material respect teaches away from the claimed invention, the art cannot be used to support an obviousness rejection.<sup>3</sup> Moreover, if a modification would render a reference unsatisfactory for its intended purpose, the suggested modification / combination is impermissible.<sup>4</sup>

### **Based upon *Tuttle et al* and *Leis et al***

**[0009]** The Examiner rejects claims 1-4, 8-28, and 32 under 35 U.S.C. § 103(a) as being unpatentable over *Tuttle et al* and *Leis et al*. Applicant's attorney respectfully traverses the rejection of these claims and asks the Examiner to withdraw the rejection of these claims.

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<sup>1</sup> *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974)

<sup>2</sup> *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970)

<sup>3</sup> *In re Geisler*, 116 F.3d 1465, 1471, 43 USPQ2d 1362, 1366 (Fed Cir. 1997)

<sup>4</sup> See MPEP § 2143.01

Independent Claim 1

**[0010]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim. In specific, claim 1 recites a servo wedge located at the beginning of the disk sector, the servo wedge having a portion that does not include a zero-frequency field. That is, as discussed in past Office Action responses, referring, e.g., to FIGS. 4 and 6 and paragraphs 22, 31, 34-52 and 54 of the present application as an example, in an embodiment a servo wedge 22 includes a preamble 74 that does not include a zero frequency field. During spin up of the disk, a servo circuit 30 exploits the properties of a sinusoid to detect the preamble 74 without the need to first detect a zero frequency field. Once the preamble 74 is detected, then a disk-drive controller may read the sector and track IDs 80 and 82 to determine an initial position of a read-write head over the disk. As a result, the disk's data-storage capacity can be increased by reducing the number of, or altogether eliminating, zero-frequency fields in servo wedges.

**[0011]** The Examiner correctly acknowledges that *Tuttle et al* does not teach this recitation. However, *Leis et al* does not rise to the level of teaching this recitation either, especially within the context of claim 1. *Leis et al* refers to an optional DC-erase field, but then never explains why such a DC-erase field is optional. That is, *Leis et al* still relies on conventional manners for using the preamble for establishing a correct gain and phase lock. Throughout the remainder of *Leis et al*, however, there is nary a mention of how this happens or why such a DC field may be optional. Thus, despite using the term "optional,"

Leis et al provides no further explanation as to why this is optional. Using an analogy, a patentable invention regarding an electric-powered vehicle cannot be anticipated by an internal-combustion engine wherein a reference may refer to the gasoline as optional.

Furthermore, the mention of the optional nature is merely passing and cannot be used to support any motivation to combine. That is, there is no reason as to why a skilled artisan would look to Leis et al just for the sake of omitting a DC-erase field without having some teaching or suggestion as to why it is beneficial to not include this field. Again, calling gasoline optional for a motor does not teach or suggest any motivation for an entirely different mode of power delivery. The argument is overly broad and conclusive. Such broad, conclusory statements do not come close to adequately addressing the issue of motivation to combine, are not evidence of obviousness, and therefore are improper as a matter of law. *In re Dembiczak*, 175 F.3d 994, 999, 50 USPQ2d 1614, 1617 (Fed. Cir. 1999).

**[0012]** Moreover, applicants submit that the Office action is using hindsight reasoning. As a matter of law, obviousness may not be established using hindsight obtained in view of the teachings or suggestions of the applicants.<sup>1</sup> To guard against the use of such impermissible hindsight, obviousness needs to be determined by ascertaining whether the applicable prior art contains any suggestion or motivation for making the modifications in the design of the prior art article in order to produce the claimed design. The mere possibility that a

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<sup>1</sup> *W.L. Gore & Assocs., Inc. v. Garlock, Inc.*, 721 F.2d 1540, 1551, 1553, 220 USPQ 303, 311, 312-13 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

prior art teaching could be modified or combined such that its use would lead to the particular limitations recited in a claim does not make the recited limitation obvious, unless the prior art suggests the desirability of such a modification.<sup>1</sup>

**[0013]** As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

#### Dependent Claim 2

**[0014]** This claim ultimately depends upon independent claim 1. As discussed above, claim 1 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, claim 2 may also be allowable for additional independent reasons.

#### Independent Claim 3

**[0015]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

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<sup>1</sup> See *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Dependent Claim 4

**[0016]** This claim ultimately depends upon independent claim 3. As discussed above, claim 3 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, claim 4 may also be allowable for additional independent reasons.

Independent Claim 8

**[0017]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claim 9-13

**[0018]** These claims ultimately depend upon independent claim 8. As discussed above, claim 8 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.



Independent Claim 14

**[0019]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claim 15-19

**[0020]** These claims ultimately depend upon independent claim 14. As discussed above, claim 14 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 20

**[0021]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claim 21-24

**[0022]** These claims ultimately depend upon independent claim 20. As discussed above, claim 20 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 25

**[0023]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

Dependent Claim 26-28

**[0024]** These claims ultimately depend upon independent claim 25. As discussed above, claim 25 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

Independent Claim 32

**[0025]** Applicant's attorney submits that the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements as recited in this claim for at least similar reasons as discussed above with respect to claim 1. As shown above, the combination of *Tuttle et al* and *Leis et al* does not teach or suggest all of the elements and features of this claim. Accordingly, Applicant's attorney asks the Examiner to withdraw the rejection of this claim.

## **Conclusion**

**[0026]** All pending claims are in condition for allowance. Applicant's attorney respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action.** Please call or email me at your convenience.

**[0027]** Any additional fees required as a result of this amendment have been paid from the below-referenced deposit account as filed herewith. Should further payment be required to cover such fees you are hereby authorized to charge such payment to Deposit Account No. 07-1897.

Respectfully Submitted,

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